

# NOTES ON AND DESCRIPTIONS OF CHALCID WASPS (CHALCIDIDAE) IN THE SOUTH AUSTRALIAN MUSEUM

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THE following is based upon material kindly loaned to me for study by the Director of the South Australian Museum at Adelaide. Descriptions of a few new forms collected by other than members of this Museum are included. All of the types are deposited at Adelaide, cotypes in the Queensland Museum, Brisbane.

## SUB-FAMILY MYMARINAE.

### **STETHYNIUM** Enoch.

#### **STETHYNIUM POEMA** sp. nov.

Runs to *S. cincliventris*, but golden, abdomen except more or less of margins, pteragma, axillae except hind margins, cephalic half parapsides, sclerites between axillae, sentum except distal  $\frac{1}{2}$  and lateral margins narrowly, black. Tibiae 2-3 dusky, so flagellum. Fringes half wing width; hind wings 5 lines discal cilia, 3 cephalic; 24 lines fine discal cilia on fore wing, the ciliation extending to opposite base of marginal. Funicles, except last two, cylindrical, 1 twice longer than wide, equal pedicel, 2-3 longest, not thrice longer than wide, distal two oval, equal, shortest.

Male black, centre of vertex and face, lateral pronotum widely and scutellum laterad of lateral sulcus, silvery-golden, legs as in female, but femur 3 also dusky; joints flagellum (excluding pedicel) twice longer than wide.

S. Aust.: Melbourne (A. M. Lea). Two males and one female, October.

## SUB-FAMILY TRICHOGRAMMATINAE.

### **JAPANIA** Girault.

#### **JAPANIA TRISTIS** Girault.

One female with the above *Stethynium*. The antennae were missing. The first pair of tibiae above bear weak teeth.

## SUB-FAMILY ENCYRTINAE.

### **TACHINAEPHAGUS** Girault.

#### **TACHINAEPHAGUS AUSTRALIENSIS** Girault.

Many specimens of both sexes from Dipterous puparia, Adelaide. Also

from a puparium taken from an opossum's nest, Adelaide. Evidently widely distributed.

**PARANUSIA Girault.**

**PARANUSIA LONGISCAPUS Girault.**

One female reared from ants, Liverpool, N.S. Wales (A. M. Lea). This specimen was entirely black.

**EPANUSIA Girault.**

**EPANUSIA BEENLEIGHI Girault.**

A female, Sydney, N.S. Wales (A. M. Lea).

**HEXANUSIA Girault.**

**HEXANUSIA SANGUINITHORAX sp. nov.**

Differs from the genotype: Stigmal, postmarginal equal, distinctly shorter than marginal, latter two and a half times longer than wide and nearly twice the stigmal. Frons a bit narrower. Abdomen short, depressed, triangular, smaller than thorax. In male stigmal a bit shorter than postmarginal.

Red, wings clear, head, abdomen purple, also face of prothorax and apical scutellum; pedicel above, club aeneous, funicle more or less dusky. Funicle 1 a bit longer than wide, a bit shorter than pedicel, 6 somewhat wider than long.

Vertex punctate, two rows punctures along frons on each side; lateral ocellus barely separated from eye, equidistant. Upper thorax densely setose, scape long.

Male with prothorax, scutellum, cephalic margin scutum across meson widely, scutum at meson caudal margin, lateral propodeum, flagellum except apex pedicel, basal half scape, purple, also coxae 1-2 in front, much of femora 1 and 3 on dorsal edge. Club solid, funicles a bit longer than wide, 1 a half longer than wide, shorter than club, pedicel shorter than funicle 2, hairs dense and longer than in female, but not long.

Has general appearance of *Tachinacphagus australiensis* Girault. The hairless line has four lines of cilia on the basal side of it in pairs, separated except caudad, where joining, the whole curves toward base.

Queensl.: Innisfail, from syrphid puparia (J. L. Froggatt), July, 1926. Host: *Syrphus balteatus*.

**ANUSOIDEA Girault.**

**ANUSOIDEA VARIA sp. nov.**

Differs from *A. aureiscutellum* in that mesopleurum, prepectus, coxa 3, femur 1 except silvery base, tibia 1 at base (rest yellow), rest of legs, purple;

apex tibia 2, tarsi, yellow. The postmarginal vein is pale and not half as long as the marginal; the straight elongate stigmal somewhat exceeds the marginal.

N.S. Wales: Stanwell Park (A. M. Lea). One female.

### **TANEOSTIGMODES** Ashmead.

#### **TANEOSTIGMODES UNIFASCIA** sp. nov.

In the table of species as follows: 1a. Scape the same; pedicel and ring-joints black. (Apex scape's dilation truncate and with a scooped-out margin, this emargination not great.) Funicle 1 slightly longer than wide, larger but not longer than the pedicel. Hairs of club not longer than those of funicle. Three loose lines discal cilia between marginal vein and the rather obscure hairless line. Wings lightly embrowned between bend of submarginal and apex of stigmal.

Dull black; dilation of scape, venation, head except vertex, upper side occiput, lower genae and a narrow line (and ridge) across joining the lower end of the eyes and passing just under antennae; propleurum, tarsi, knees, tibia 1 more or less, tibial tips, tegulae, cephalic  $\frac{1}{2}$  mesopleurum, golden. Abdomen scaly, thorax finely reticulated. Distal funicle much wider than long.

S. Aust.: Mount Lofty (A. M. Lea). One female.

### SUB-FAMILY EUPELMINAE.

#### **EUPELMUS** Dalman.

#### **EUPELMUS UNIPUNCTIPENNIS** sp. nov.

In my revised table of this large Australian genus, runs to *E. lutheri*, and is a typical member of the genus with approaching axillae.

Entirely blue except knees 1-2, tibial tips, and tarsi. Ovipositor half length of abdomen. Wings clear, but with a distinct, large, rounded, brown spot appended from costa near apex postmarginal vein, latter nearly twice the long, curved stigmal. Lateral ocellus a bit closer to eye than to median. Cheeks with longish hairs. Mesopleurum with only sparse hairs cephalo-ventrad. Hairs from proventer not long.

Funicles 2-4 twice longer than wide or nearly, longest, longer than pedicel, others shortening (last 5 antennals missing). Scape with a distinct, rectangular foliaceous expansion.

Tasm.: Mount Arthur, Dec., 1915 (F. M. Littler). One example.

## SUB-FAMILY CLEONYMINAE.

**MESAMOTURA Girault.****MESAMOTURA KEATSI sp. nov.**

Like *M. corticis*, but femur 3 aeneus except basal  $\frac{1}{4}$ , base tibia 3 shortly black; basal thick part of ovipositor not  $\frac{1}{3}$  ovipositor, which exceeds length of body; leg 2 more or less purple; base of dilation of tibia 3 proximad of middle.

Queensl.: Kuranda, Nov., 1919 (A. P. Dodd). One female.

**MESAMOTURA AESCHYLI sp. nov.**

As *M. keatsi*, but in femur 3 only distal  $\frac{1}{6}$  red, tibia 3 with no black at base, ovipositor shorter than body, basal thick part not a half; base of the dilation of tibia 3 slightly proximad of middle; leg 2 except coxae and the paler tarsi, red; tarsus 3 not white, black after joint 1.

Queensl.: Nelson, July, 1920 (A. P. Dodd). One female.

The species are to be collected from the trunks of dying trees, and are doubtless associated with wood-inhabiting Coleoptera.

**SCHIZONOTELLA gen. nov.**

Legs simple, third femur a bit thickened. Habitus of *Eupelmus*. Middle of propodeum with an erect column, two black hair tufts on forewing, one off base of bend of submarginal vein, the other on base of marginal. Prothorax long, obconical, a bit exceeding length of scutum; furrows complete, widely separated. Propodeum with distinct lateral carinae and a carina laterad of the subcentral, small, round spiracle. Petiole quadrate, rest of segments (2, 4-7) large, 3 very short, ovipositor  $\frac{2}{3}$  abdomen. Lateral ocellus twice closer to median than to eye, near median. Hind tibial spurs small, the smaller minute. Postmarginal elongate, twice the stigmal. Antennae 11 jointed, club solid, below eyes.

**SCHIZONOTELLA EUPELMOIDEA sp. nov.**

Orange; apex coxa 3, base femur 2 and of tibia 3, ovipositor except distal  $\frac{1}{4}$  plus, tarsi, white; scutellum between its 4 bristles, base to apex, abdomen, pronotum caudad more or less, leg 3, axillae, coxa 2, trochanter 2, tibia 2 at base, purple; apex ovipositor black, also club and distal two funicles; funicle 1 a ring-joint, stout, 2 four times longer than wide, 8 twice longer than wide, 2 equal the elongate pedicel. Sealy, frons cephalad of ocelli, glabrous; sculpture coarser on scutum.

Forewing infuscated from first hair tuft nearly to apex and with four hyaline spots in pairs at opposite margins, second pair apex stigmal vein.

Queensl.: Kuranda, Oct., 1919 (A. P. Dodd). One female.

### **ALIGHERINIA Girault.**

#### **ALIGHERINIA ANGUSTIFRONS sp. nov.**

As genotype, but scutellum but slightly convex, not mound-shaped, ovipositor extruded for length equal that of abdomen, or nearly, the frons back of ocelli narrow, lateral ocelli barely separated from eye and closer together than either is distant from median. Frons where narrowest more than diameter of an ocellus. Eyes closely pilose. Spiracle round, the propodeum with a median carina, fuzzy laterad and behind. Segment 2 subequal 5, largest, 3 and 4 each shorter by a bit. Femur 1 somewhat swollen and slightly excised beneath at apex. Frons-vertex long, wedge-shaped, cephalic margin carinate. Scrobes short. Pedicel elongate, equal funicle 2, which is four times the quadrate 1 and also equal to the solid club; funicle 3 twice longer than wide, rest shorter. Femur 3 beneath with edges carinate but quite straight.

Entirely aeneus; tarsi except joint 5 and tarsus 3, joints 2-5, white; dorsal aspect tibia 3 ivory white. Forewing brown across from all of marginal and stigmal veins. Dorsal thorax densely shagreened (except propodeum only), scutellum without median carina.

Queensl.: Kuranda, Dec., 1919 (F. P. Dodd). One female.

The narrow ivory on dorsal tibia 3 is not always present. Sometimes femur 2 bears a yellow-white spot at apex on one side.

### **EPISTENIA Westwood.**

Differs from *Thaumasura* in that the antennae are inserted on a level with the ventral ends of the eyes, or a bit lower. The two hind tibial spurs, though unequal, are not elongate, and the prothorax is longer than wide, the axillae somewhat advanced. Lateral margins of abdomen carinate.

#### **EPISTENIA SPECIOSISSIMA sp. nov.**

Brilliant aeneus and finely punctate. Tegulae, legs (except a large blotch on ventral half, lateral aspect femur 3 between middle and apex, an annulus on tibia 3 less than its width from base and a lesser one same place tibia 2, also the aeneus proximal half of coxa 3) and basal half of scape, golden. Funicles 5-7 white. Somewhat resembles *Thaumasura pulchripes*. Forewing with infuscation as in *Thaumasura*, but the loop distinctly broken at middle and at base,

leaving the basal part an isolated, middle spot. Pedicel elongate, exceeding funicle 2, which is twice longer than wide, 1 wider than long, 8 quadrate, club exceeding pedicel. Postmarginal vein elongate, shorter than the marginal, over twice the stigmal.

Eyes densely pilose; prepectus finely punctulate; cheeks bordering genal suture glabrous; ocelli equidistant, lateral a bit closer to eye than to median.

Abdomen flat above, conical, exceeding thorax, last segment stylate and half as long as the ovipositor, which is  $\frac{1}{4}$  abdomen, segments large, 6 largest, longer than wide, 3 very short, surface finely wrinkled or reticulated, 2 glabrous, 7 hairy.

Differs from *E. miripes*: Two marks on forewing, fore femur distinctly more swollen and distinctly excised beneath at apex, the basal end of the excision guarded by an acute tooth; funicle 5 is white (usually dark in other); fore leg usually without blotches (except on distal tibia beneath).

Queensl.: Kuranda, Nov. and Dec., 1919 (F. P. Dodd).

### THAUMASURA Westwood.

#### THAUMASURA MARMORATIPENNIS sp. nov.

As *T. dentatitibia*, but hair of cheek sparse, short, short on back of vertex and on tibia 3; most of posterior margin of eye except above fringed densely with long, appressed silvery hairs. Eyes naked. Teeth above on tibia 3 pale. Scrobes not reaching, by far, to the cephalic ocellus (reaching to ocellus in other); clypeus glabrous (punctate in other). Ocelli equidistant from each other. Ovipositor  $\frac{2}{3}$  abdomen. Funicle red, joint 2 not quite as long as pedicel. Loop of wing distinct, complete, basal area as large as distal, latter with two hyaline crescents side by side in its middle. Funicle 8 longer than wide, shorter than club. Femur 1 excised beneath at apex, 3 convexly swollen. Hind tibial spurs short, equal.

Tarsi, bases of femora, knees 1-2, tibia 1 except beneath distad, 2 except not quite proximal half and distal  $\frac{1}{3}$  except beneath, and tibia 3 at little over distal  $\frac{1}{2}$ , golden. Propodeum with two large foveae at meson. Prepectus densely punctate. Thorax coppery, with dark velvety areas, four of these on scutellum. The male is very similar, but its propodeum is longer, and bears a median carina.

Queensl.: Kuranda, Dec. (F. P. Dodd). One female.

#### THAUMASURA PULCHRIPES sp. nov.

Ovipositor not extruded, abdomen nonstylate, 7 noncarinate. Scape and legs mostly pale whitish blotched with aeneus, funicles 3-5 whitish, also apex of

2 (and 4–6 slightly). Forewing with distinct loop, at each end of the loop the infuseation continued across the wing; apex of wing dusky. Discal cilia extended to base on cephalic half, but only after a wide space of nearly colourless cilia against submarginal; funicle 1 longer than wide, 2 not as long as the elongate pedicel. Club over twice the length of the distal funicle. Propodeum with median carina only, spiracle round, smaller than usual. Excision beneath at apex of femur 1 great. Hind tibial spurs small. Lateral ocelli closer to each other than either is distant from median.

Queensl.: Redland Bay, Feb., 1926. Two females from trunk of dead gums. Cotype in Queensland Museum.

**THAUMASURA AURITEGULA** sp. nov.

As *T. arenae* Girault, and small, the ovipositor somewhat more prominent; abdomen, however, brilliant coppery, and with golden (silver at base) fuzz along upper sides, conspicuous on 7 and dorsad there also. Wings clear.

Blue, legs except coxae and funicles 1–3 red. Funicle 1 longer than wide, 2 over twice longer than wide, but shorter than pedicel. Scrobes of the long, narrow, deep kind, and to median ocellus. Venation, tegulae golden.

Differs further from *T. arenae*: Propodeum short at meson, without a distinct carina there, spiracle not rounded, segment 7 bears a strong median carina, and femur 1 is excised beneath at apex.

Ocelli equidistant, lateral closer to eye than to median. Eyes pilose. Frons wide. No long hairs on head. Hind tibial spurs short, equal.

Queensl.: Nelson, Dec., 1919 (A. P. Dodd). One female.

**THAUMASURA BELLA** Girault.

Tasm.: Bridgeport (F. M. Littler, No. 2669).

This species differs from *T. brevistylus* in having only funicles 2–4 red, and the ovipositor is half the length of the abdomen, tibiae 1–2 aeneous above. The frons is wide.

There are two females in the Macleay Museum collection from South Australia.

**THAUMASURA DENTATITIBIA** sp. nov.

Hind tibia with a long, spiralled dorso-lateral ridge, which bears 4–5 stout teeth, the latter increasing in size. Hairs from caudal vertex long, black; those from tibiae 2–3 dorsad long, white; cheeks with long greyish hairs. Pattern of wing not solid. Eyes naked. Lateral ocelli closer than either is to median.



Ovipositor equal abdomen. Legs partly aeneus on femora and tibiae. Tegulae black, funicles 2-4 red, hind tibial spurs shorter and stout. Coxae aeneus.

Vict.: Mooroopna, Dec., 1923 (F. E. Wilson). One female; Queensl: Chinchilla (A. P. Dodd), cotype in Queensland Museum.

**WESTWOODIANA Girault.**

**WESTWOODIANA PURPUREIPES sp. nov.**

Differs from the genotype: Scape purple, ovipositor a bit longer, neck of stigmal vein equal to shortest diameter of knob. The same otherwise, but base femur 1, leg 2 except tarsi, knee and base widely of tibia and leg 3 except tarsi and base of tibia, purple.

Queensl.: Kuranda, Oct., 1919 (A. P. Dodd). A cotype female in Queensland Museum and two more from same source examined. Compared with type of the genotype.

**SYSTOLOMORPHELLA Girault.**

**SYSTOLOMORPHELLA SILVIFILIA sp. nov.**

Forewing with a cross stripe from stigmal vein and proximal half postmarginal, the stripe widening at middle. Club without spicule, merely obtusely pointed at apex; ring-joint present; scape clavate and roughly sculptured above at apex; extension of distal funicle not attaining apex club.

Antennae reddish, club black; more or less infuscation about bend of submarginal vein and opposite on caudal margin. Hind femur moderately swollen, serrulate beneath and slightly excised at apex; spiracle round, moderately large.

Lateral ocelli closer to eye than to median ocellus, but distinctly further apart than either is distant from median. Legs except coxae 3 and tegulae red.

Tasm. (A. Simson, No. 3407).

One female compared with types of all allied forms, from which it is separated by bearing unifasciate wings.

**DINOURA Ashmead.**

The antennae in this genus are 13-jointed, with two ring and three club joints. The axillae are much advanced, and the postmarginal and stigmal veins short, equal.

**DINOURA PULCHRA sp. nov.**

Characterized by the comparatively short ovipositor, which is only equal in length to the abdomen. Basal half of abdomen, more or less, red-yellow. Hind



femur red except basal half and distal sixth (in mesal aspect, however, with much more red, only extreme apex purple); tibia 3 white at base and apex; segments 2-5 of abdomen, except apex of 5, red.

S. Aust.: Adelaide (R. L. Barringer). One female.

There are five members of this genus.

### EPISYSTOLE gen. nov.

Characterized by the teeth on the hind femur being as in *Chalcis*, by the pilose eyes, and the enlarged femur 1. Scrobes joined above, forming a triangle whose apex is distant from cephalic ocellus, latter thrice farther from lateral than they are from eye. Densely punctate and pilose. Meson propodeum widely long striate, a patch of silvery hair caudad of spiracle. Hairs longer from back of cheek and side of femur 1 and upper metapleurum.

Antennae 13-jointed, club with a long, conspicuous spicule which is more or less hooked at apex. Scape dilated below at apex; pedicel elongate, twice funicle 1, which is twice longer than wide. Ring-joint twice longer than wide.

The male is similar, but antennae aeneous, 3 equal segments abdomen, funicles shorter.

Entirely metallic; basal  $\frac{1}{3}$  tibiae 3 ivory.

1. Funicles 1-3 dark red; an ivory spot at dorsal base tibiae 1-2; funicle 1 shorter than pedicel, twice longer than wide, or less. Joints 1-3 of tarsi 2-3, 1-2 of tarsus 1, white. Wings lightly infuscated from marginal and stigmal veins. Distal joint maxillary palpus sometimes white. Punctures of face coarser than those of vertex (genotype) .. *poeta* sp. nov.
2. Antennae all metallic, so tibiae 1-2; funicle 1 a little exceeding the pedicel, four times longer than wide. Larger. The same .. .. . *meteora* sp. nov.

The genotype was captured from the bark of a dead *Acacia*, Morningside, Queensland, Feb., 1926, and the types are in the Queensland Museum. The species *E. meteora* was captured at Chinchilla, Queensland (A. P. Dodd). The type is in the South Australian Museum. A paratype of the first species is also in the last-mentioned Museum.

### SUB-FAMILY PERILAMPINAE.

#### PERILAMPUS Latreille.

#### PERILAMPUS BRISBANENSIS Girault.

Tasm.: Hillwood, Feb., 1915 (F. M. Littler, No. 2637). One female.

**PERILAMPUS CAPENSIS** Girault.

A female, Meadows, S. Aust.

The sculpture of segment 3 of abdomen is not a glaze, since the puncturation has spaces between.

**PERILAMPUS AQUILONARIS** Girault.

A female, Melrose, S. Aust., Oct. (A. M. Lea).

Segment 3 of abdomen bears 3 rows of pale hairs. Differs from *P. saleius* Walker in its pale venation, red flagellum (minus pedicel), longer stigmal vein, the more sculptured mesal margin of parapside and the pale tegulae. The abdomen is green, and the thorax is bronze-brassy.

I have the species *P. saleius* Walker from Queensland, where it was reared in connection with a lepidopterous pest of cotton, Biloela, Queensl. (E. Ballard).

**PERILAMPUS CUPREOVARIUS** sp. nov.

Head with upper half of face coarsely striate, lower entirely densely punctate (except sclerite between clypeus and antennae); cheeks and occiput striate. Tibiae concolorous. Median ocellus a bit advanced, at apex of scrobes, slightly closer to lateral than latter is to eye. Scutellum emarginate at apex.

Coppery, segment 3 green, venation black, knees, tibial tips (both narrowly) and tarsi red. Postmarginal shorter than marginal. Parapside all punctate, except a small glazed area, cephalad of middle. Segment 2  $\frac{1}{3}$  surface, cephalic, glabrous, 3 largest, densely glazed, pin-punctulate, nearly rest of surface, its apex shining coppery; 4 short, glazed, brilliant coppery at apex, prepeetus glazed. A long, feebly cross-striate area across middle of mesopleurum (down from beneath tegula). Propodeum densely punctate laterad (margin to spiracle). Facial margin eye fringed with lashes, these short.

Tibia 1 reddish along one side at apex.

S. Aust.: Melrose, Oct. (A. M. Lea). Type female. Cotype female, S. Aust. (Rev. A. P. Burgess, No. 1792). Paratype female, Tasm. (A. Simson, No. 2709). The cotype has been deposited in the Queensland Museum.

**SYSTOLOMORPHA** Ashmead.**SYSTOLOMORPHA THYRIDOPTERYGIS** Ashmead.

Many pairs from galls on *Casuarina quadrivalvis*. S. Aust.: Belair, Sep., 1885 (J. G. O. Tepper).

This species differs from *S. nassaui* mainly in that the legs have more black, the hind femora always black to apex, and femur 1 is always widely black from

base. The flagellum is more brownish. The wings are usually hyaline, but may bear a cloud, as in *S. nassaui*. However, the two species are easily separated by the colour of the oral cavity and palpi, yellow in this species, and black in *S. nassaui*.

Very likely this species has no connection with the insect after which it is named. The species is one of the gall-forming Perilampinae, and *S. nassaui* was also reared from galls on the same genus of plants. Both species vary in colour and infuscation of the wing.

**EURYTOMOMMA Girault.**

**EURYTOMOMMA ATRICOXA sp. nov.**

As the genotype, but venation black and the distal veins less unequal (stigmatal and postmarginal, latter distinctly shorter than marginal, yet of good length); cheeks and entire margins eye golden (all of head so, except occiput and vertex). Funicles gradually increasing in size from the smallest (ring-joint) to the largest (8), latter much wider than long; legs marked with black streaks along cephalo-dorsal aspect of femora 1-2 and basal  $\frac{2}{3}$  of mesal aspect of femur 3; first five flagellar joints of antennae except apex of pedicel, blackish, distad only suffused yellow, scape lemon.

Thorax: Pronotum lemon; distal  $\frac{1}{3}$  parapside, cephalic half lateral margin scutum, middle lateral margin scutellum and of caudal margin axilla, post-scutellum, golden.

Minute punctures all over lower face; no median carina on scutellum, but one on propodeum, which forks at middle, and a lateral sulcus instead of lateral carina, spiracle oval.

Lateral ocellus twice closer to eye than to median. Tibiae armed above with short and stiff spines.

S. Aust.: Ooldea (A. M. Lea). One female.

SUB-FAMILY EURYTOMINAE.

**EURYTOMA DESCARTESI Girault.**

A female, Gawler, S. Aust. (A. M. Lea).

This is a widely distributed species in eastern Australia.

**EURYTOMA SEMIFUSCICORNIS Girault.**

Many females and one male reared from *Doratifera longerans*, Nov., 1891, Adelaide.

**EURYTOMA EYLANDTI** sp. nov.

Runs to *E. nelsonia* and allies. Abdomen ovate, rounded above, petiole wider than long, entirely blood-red, except petiole and apex (distal  $\frac{2}{3}$  of 7). Femur 3 blood-red. Flavours of propleurum upper half cephalic margin (rather widely). Legs and antennae black, except base of scape, knees, tibial tips, base tibia 3, tibia 1 (except a mark on one side near base, rest red, paler above and at tip), femur 1 beneath, these dark red or paler (tarsi and apex of tibiae white). Forewing with a brown half-complete cross stripe from marginal and stigmal veins.

Lateral ocellus midway between median and eye. Tegulae dark red. Venation brown, postmarginal shorter than marginal, exceeding stigmal. Segment 5 longest, but not much longer than either of 2-4, abdomen reticulated. Propleurum finely reticulate, femoral furrow cross-striate. Funicle 1 thrice longer than wide, much exceeding the short pedicel. Coxa 3 above with a distinct triangular tooth near apex. Moderately robust.

N. Terr.: Groote Eylandt (N. B. Tindale).

**EURYTOMA SILVIPUER** sp. nov.

In my table of Australian species follows *E. cressoni limoni* Girault under the heading "Legs red except coxa 3." Tarsi, tibial tips, knees, pale.

The same, but median basin of propodeum rather flat, triangular, bounded by an oblique carina on each side of meson (from half-way to spiracle and converging to apex), two shallow foveae at base, and no channel; fine, wrinkled rugae run through the area, with interspaces punctulate. Apex pedicel, scape, tegulae, and venation yellow-red.

Abdomen red except 2-4 dorsad, tip and segment 7 except base, acutely ovate, segment 5 over twice 4, distinctly largest. Femoral furrow punctulate. Postmarginal vein exceeding the stigmal. Funicle 1 exceeding the small pedicel, but only a bit longer than wide. Lateral ocellus distinctly closer to eye than to median. Pubescence rather abundant and noticeable. Otherwise usual.

S. Aust.: Mount Lofty (A. M. Lea). One female.

**EURYTOMA SALTINATUS** sp. nov.

Runs to *E. dumasi*, but coxae 1-2 yellow-red. Moderately robust. Propodeum with an almost rectangular, finely punctulate median basin, petiole short, venation yellow, postmarginal a bit exceeding stigmal, both shorter than marginal. Funicle 1 quadrate, much exceeding the globular pedicel, 2 wider; scutellum with distinct, scattered pubescence, the punctures wider apart than usual.

Antennae, ovipositor except tip, tegulae, legs except coxa 3, red-brown.

Segment 5 equals 2-4 united, abdomen ovate, pointed at apex. Lateral ocellus closer to eye than to median. Propleurum, femoral furrow, punctulate. Tarsi white.

S. Aust.: Mount Pleasant, Feb., 1896. Two females from lerp galls.

**EURYTOMA FILISILVAE sp. nov.**

As *E. aequalivena* Girault, but legs red except coxae and femur 3, antennae short, clavate, funicle 1 subquadrate, exceeding pedicel, rest wider than long, scape red-yellow except above for distal  $\frac{3}{4}$  or except base, club (and often distal funicles) yellowish. Petiole longer than wide, segment 5 equals 2-4 united, shining, with a cross-row of short setae just beyond middle, 5 over twice 4. Postmarginal slightly exceeding stigmal. Femoral furrow punctulate. Lateral ocellus a bit closer to eye than to median.

(Channel unifoveate. Propleural spot slightly visible from above. Venation yellow. Abdomen ovate. Tegulae dark.)

S. Aust.: Mount Pleasant. Many females with *E. saltinatus*.

**DECATOMA Spinola.**

I consider *Eudecatoma* Ashmead to be the same as this genus.

**DECATOMA SIDNICA sp. nov.**

Differs from *D. persephone* (described later) as follows: Smaller, body all black except cephalic margin prothorax; mesal area of propodeum not rugulose, much smaller but of same shape (its sides are short and nearly straight, oblique), it does not attain apex, but ends obtusely before apex, giving off a perpendicular carina to apex from each side of its apex; the carina forming its base (two oblique sides), is continued to the spiracle, and a lateral carina is given off from it near the spiracle; the surface of the propodeum is much smoother; the abdomen is only suffused with yellowish. From *D. medioimpunctus*: In colour, in having the apex margin (here obtuse apex) of mesal area of propodeum much shorter than the basal; the substigmal spot nearly reaches centre of the wing.

Legs except coxa 3 and femur 3, tibia 2-3, antennae, yellow-brown. Scutum except cephalad, scutellum except median line and pronotum umbilicately punctate.

N.S. Wales: Sydney (A. J. Coates). A female reared from Port Jackson fig (*Ficus rubiginosus*).

**DECATOMA PERSEPHONE sp. nov.**

As *D. medioimpunctus*, but wing marking longer, cheeks except above, face down from antennae, vertex and pleurum of thorax (save latter above), abdomen

except 6 (suffused yellow), petiole, propodeum, hind legs except tarsi, tibial tips and knees, coxae 1-2, and more or less of leg 2, black. Segment 5 somewhat exceeding 4. The lateral margin of mesal area leaves base mesad of the spiracle and is straight; the apical margin is shorter than the basal. Smoother median line of scutellum wider, not markedly distinct.

Queensl.: Bowen, Nov. (H. Tryon). Types, two females reared from *Ficus* fruit. Cotypes in Queensland Museum.

SUB-FAMILY CHALCIDINAE.

**CHALCIS Latreille.**

**CHALCIS RUSKINI Girault.**

Two females, Mount Lofty; a third at Ardrossan, S. Aust. (J. G. O. Tepper).

**CHALCIS REGINA Girault.**

A female, Lucindale, S. Aust. (B. A. Feuerheerdt); two females, Bowen, Queensl. (A. Simson, No. 2272).

**CHALCIS POMONAE Cameron, EDNA var. nov.**

Like the typical form, but tibia 3 black at base, tibia 1 narrowly yellow along one cephalic aspect. Black cinetus of tibia 3 about equal distal yellow, basal yellow barely shorter and much exceeding black at base. Tibia 3 black at base. S. Aust.: Adelaide (J. G. O. Tepper). Two females.

**CHALCIS RUBRIPES Girault.**

A female, Launceston, Tasm., Feb., 1914 (F. M. Littler, No. 2668).

**CHALCIS RUBRIPES VERGILII Girault.**

A male and female, Launceston, Tasm., Feb., 1911, No. 2255 (F. M. Littler). In the male, tibia 1 dorsad was entirely black.

**CHALCIS CALLIPHORAE Froggatt & Froggatt.**

A male, Ardrossan, S. Aust. (J. G. O. Tepper).

**CHALCIS CALLIPHORAE SANGUINIVENTRIS Girault.**

Differs from the typical form in having tibiae 1-2 red, 2 black above. Apical  $\frac{1}{4}$  femora 1-2 golden, red of tibia 3 much exceeding golden at base and apex.

There were one male and three females in the collection from Adelaide (J. G. O. Tepper).

**CHALCIS JUNO** sp. nov.

Runs to *C. minerva* (described later), but tibia 3 black, so tarsus 3. Leg 1 except coxa and base of femur, 2 except base of femora and all of tibia 2 except each end, red. Tegula yellow, abdomen beneath red, so coxa 3. Tibia 3 suffused with red. Eight femoral teeth, 1, 5-7 largest.

S. Aust.: Owicandana, Northern Flinders Range (H. M. Hale and N. B. Tindale). The type specimen only.

**CHALCIS MINERVA** sp. nov.

Runs to *C. dipterophaga*, but hind tibia all black except for a dull yellow ellipse, this long, at apex above; leg 1 except coxa, proximal half femur and base of tarsus, knees 1-2, each end and beneath narrowly, tibia 2, tarsus 2 except at base, dull golden. Femur 3 all red. Tegula yellow. Abdomen beneath more or less red, also entire side of 2. Segment 3 densely punctate dorso-laterad, 3-4 of the lines joined across meson on cephalic half, rest of dorsum beyond densely pin-punctate.

S. Aust.: Owicandana, Northern Flinders Range (H. M. Hale and N. B. Tindale). Two females.

**CHALCIS SCHUBERTI** Girault, **MARIANA** var. nov.

As typical form, but tegulae all yellow, basal yellow spot tibia 3 distinctly exceeding basal black, the distal long and to apex. Punctures scutellum uniform; segments 4-6 also red except on dorsal meson widely; abdomen red beneath.

S. Aust.: Port Augusta, Dec., 1904 (M. Schultz). One female.

**CHALCIS RUFICORNIS** Girault.

A. female, Bowen, Queensl. (A. Simson, 1940/4681).

**CHALCIS PUELLA** sp. nov.

Follows *C. shelleyi*. Legs and tegulae golden but coxae black, femur 3 and base narrowly of tibia 3 above, red; apex femur 3 at distal  $\frac{1}{3}$  (lateral aspect) except narrowly dorsad, yellow. Punctures scutellum coarser than those of sentum. Lateral ocelli closer to eye than to median. Extreme base of femur 1, basal half femur 2, red. Normal.



Queensl.: Kurranda (A. P. Dodd). Type and paratypes in South Australian Museum, one female, one male, and two females respectively. Cotype and paratypes in Queensland Museum.

**CHALCIS ALIGHEREI** sp. nov.

To follow *C. aureus*. Black, with a distinct pubescence which is yellowish in places; the following crimson: Scape, tegulae, tibiae, femur 3, distal  $\frac{1}{3}$  femur 1, apex femur 2. The following golden: Tarsi 1, knees, apex upper side femur 3, two spots above on tibia 3, basal much exceeding red proximad of it, distal at apex. Tarsi 2-3 white. Rest of legs black, including middle narrowly of ventral edge of side of tibia 3. Hind femur with 10 teeth, 2 and last two smallest. Ventral meson abdomen more or less reddish, segment 2 glabrous. Middle red tibia 3 exceeding basal yellow. Lateral ocellus somewhat closer to eye. Small species.

Queensl.: Nelson, Dec., 1920 (A. P. Dodd). One female.

**CHALCIS POEMA** sp. nov.

Black, the following golden: Tegulae, tibiae, tarsi, knees, distal  $\frac{2}{3}$  femur 1, distal  $\frac{1}{3}$  femur 2; in lateral aspect, extreme base (except dorsad) of femur 3, distal  $\frac{1}{5}$  of same. The following dark red: Upper side more or less of segment 2, lower sides more or less of rest, all of mesal aspect of femur 3 except the distal yellow and central black; of lateral aspect femur 3, all dorsad to the distal yellow, and around the black to the narrow basal yellow. On femur 3 lateral aspect a large rounded black area at middle from ventral edge up  $\frac{5}{6}$  way to dorsal edge (this area smaller on mesal aspect). Normal. A dozen femoral teeth. Segment 3 with 4-5 lines distinct thimble punctures across meson.

Queensl.: Nelson, May, 1920. Type female. Cotype from maize, Cairns (A. P. Dodd).

**PHASGONOPHORA** Kirby.

**PHASGONOPHORA MILTONI** sp. nov.

Scutellum with an entire plate at apex. As *Xenurretocera* genotype, but femur 3 with (7) large teeth, postmarginal and stigmal veins distinct, stigmal with knob and longer, abdomen at apex produced into a short, compressed, punctate, hairy, subquadrate (lateral aspect) stylus. Antennae at middle of face.

Black with yellow pubescence, but this is not profuse; tegula, tarsi, tibia 1, 2 save above proximal  $\frac{1}{4}$ , mesal aspect femur 2, apex of femur 3, distal  $\frac{1}{3}$  tibia 3, golden-red; distal  $\frac{1}{6}$  forewing smoky; from this runs a midlongitudinal arm,

expanding into an arrow-head, which is appended from stigmal knob; cephalic margin also infuscated from postmarginal vein distad; apex wing 2 infuscated.

Punctate. Lateral ocellus much closer to median than to eye. Funicle 1 somewhat longer than wide, much exceeding the cup-shaped pedicel, the ring-joint large but smaller than pedicel. Abdomen truncate and earinate across base, also at lateral margin at base; segment 2 half surface. Propodeum rugulose, a coarse pair of median rugae.

The male is similar, but the antennae are filiform, funicles longer.

Neither of the two Australian members of this genus has any marked propodeal prominences; they agree in all essential details, differing in colour, and greatly in the length of the abdominal stylus. The flagellar joints are not long.

Queensl.: Kuranda, Nov., 1919 (A. P. Dodd). Type, a pair. A eotype female in Dec., same place, in the Queensland Museum.

The species *P. rufinotum* was formerly placed in *Megalocolus*.

#### **METARRETOCERA gen. nov. (Haltichellini).**

As *Xenarretocera* genotype but facial margin of eye distinctly earinated as in *Stomatoceras*, segment 2 glabrous,  $\frac{1}{2}$  plus surface, with four earinae at base, one each side of meson (wide apart), others at lateral margin, all short ( $\frac{1}{4}$  length of the segment); other segments short but 7–8 longer. Postmarginal slight. Scutellum simple.

#### **METARRETOCERA BURNSI sp. nov.**

Black, the wings deep brown except costal cell and longitudinal streaks; knees 1–2, tarsi, tibial tips, apex scape, pedicel, and the short funicle 1, red-brown; distal  $\frac{1}{2}$  wing 2 dusky. Funicle 2 equal pedicel, longest, half longer than wide; lateral ocellus at apex facial earina, closer to eye than to median.

Punctate, coarser on scutellum. Propodeum with six longitudinal rugae, two median, others interlacing. Teeth hind femur on about distal half, on a long, slight convexity. Pubescence not great.

Queensl.: Nelson, Oct., 1920 (A. P. Dodd). Two females.

#### **XENARRETOCERA Girault.**

This genus belongs to the Haltichellini.

#### **XENARRETOCERA TRICARINATA sp. nov.**

Legs except coxae red. Tegulae black. Segment 2 half surface, 3 large but not half of 2, latter at base with three straight earinae along about basal  $\frac{1}{3}$ , one

at meson, others not quite at lateral margin (latter carinated at base). Antennae red, club darker. Wings clear.

Femoral teeth commencing at distal  $\frac{1}{4}$  in an acute point, then to apex in a concave line. Abdomen above finely reticulated, more coarsely proximad. Funicles subquadrate. Lateral ocellus a bit closer median than to eye.

Queensl.: Nelson., Oct. and Dec., 1920 (A. P. Dodd). Two females, type and paratype.

### **PARENIACA Crawford.**

#### **PARENIACA EMERSONI sp. nov.**

Abdomen without fine, close striae above at base, but with three short, well-separated carinae on each side of meson. Lateral margin propodeum "bidentate." Propodeum with a pair of curved median rugae which join well before apex, and a long, strong ruga between these and the carinated, irregular lateral margin. Petiole usually longer than wide, with six coarse rugae. Pedicel subelongate, exceeding funicles, of which 1 is smallest, rest more or less quadrate. Wings lightly embrowned. Lateral ocelli distinctly closer to eye than to each other. Postmarginal absent, knob of stigmal sessile and nearly parallel with costa. Area of carinae on segment 2 much wider than long. Scutellum uniformly punctate.

Antennae, legs 1-2 save coxae and middle lateral aspect femur 1, tarsi, red. Pubescence golden. Distal funicles wider than long.

A species showing considerable variation in length of petiole and in *number* of striae or carinae at base of segment 2.

Queensl.: Babinda, Feb., 1920 (A. P. Dodd). Type female; cotype female, Nelson, Jan., 1920 (same collector).

#### **PARENIACA ATRICORNIS sp. nov.**

Striae of abdomen at base, 8, the area quadrate, its distal margin a bit concave and far before middle, segment 2 nearly the whole surface. Wings slightly dusky. Disk of scutellum with a glabrous area. Tegulae, legs, and antennae black except tarsi, knees 1-2 narrowly, tibial tips 1-2. Two teeth beneath in front coxa 3. Lateral ocelli slightly closer to each other than to eye, yet closer to median. Pubescence grey. Petiole quadrate. Propodeum as in *P. boussingaulti*, and the carinated lateral margin is subparallel with the long lateral carina. The short carina from "circle" of median carina to the lateral carina originates a bit distad of the centre of the "circle," which is oval. Apex pedicel, of scape (rarely flagellum more or less), reddish.

S. Aust.: Adelaide (A. M. Lea). From females reared from striatiomyiid-like larvae. Paratypes in Queensland Museum.

**STOMATOCERAS Kirby.****STOMATOCERAS CARLYLEI Girault, SALTI var. nov.**

As description of the typical form, but of pedicel only apex, red, tegulae all red, and coxa 1 is black; rectangle from marginal vein produced into the disc, and therefore nearly as long at longest point as wide (or nearly as deep as wide). Segment 2  $\frac{1}{3}$  surface. Teeth hind femur on about distal half in two crenulations, the first the shorter.

Male, antennae all black, so segments 3-4 above, wings clear. The same as female elsewhere. Small.

Coxa 1 is invariably black in all species of the genus, and it is segment 7 of the abdomen which is rugoso-punctate (not 8).

S. Aust.: Mount Lofty (J. G. O. Tepper). Two males, six females.

**STOMATOCERAS SALTENSIS sp. nov.**

As *S. fasciatipennis* Bingham, but a distinct space exists between the eye and the acute margin of the scrobes, the postmarginal distinctly exceeds the marginal, and the stylus is twice longer than wide. Moreover, the tegula is black except at apex, and funicle 1 is shorter than the pedicel but distinctly longer than wide.

Lateral ocelli not twice closer to eye than to median. Femoral teeth on first a long, slightly wavy line, then a short, distinct convexity.

Tasm.: Georgetown, Nov., 1914 (F. M. Littler, No. 2668). One female.

**STOMATOCERAS LUCI sp. nov.**

Runs to *S. ratzeburgei*, but distal  $\frac{1}{2}$  abdomen 2 above, 3 and base of 4, tegulae, legs except coxa 1, first 4 antennals, red. Loop of forewing complete. Funicle 1 quadrate, 2 equal pedicel. Lateral ocellus twice closer to eye. Post-marginal vein slightly exceeding the marginal. Teeth of femur 3 on distal  $\frac{2}{3}$ , two equal parts, first nearly straight, second a distinct convexity.

W. Aust.: Mullewa (Miss J. F. May). One female.

Colouration appears to be the specific characteristic in this genus, which, like *Chalcis*, is rich in species; many of these are difficult to define.

**CHALCIDELLIA Girault.****CHALCIDELLIA GUTTATIPENNIS sp. nov.**

Black, veins black, the forewing with a large blackish mark from distal half marginal vein, postmarginal and stigmal; this extends half-way across, and then

becomes diffused to hind margin (for a distance in either direction). Flagellum except pedicel and club, red, also sides and venter of abdomen more or less, tarsi, knees, and tibial tips narrowly.

Differs from genotype also in the following particulars: Funicle 1 is somewhat shorter, also the abdomen, the pubescence is more distinct, especially on lateral pronotum, where it is visible and golden.

The scutum in both species is spinose cephalad.

Queensl.: Kuranda, Nov. (A. P. Dodd), from tree trunks. Three females from tree trunks; type, cotype, and paratype.

### IRICHOHALTICHELLA Cameron.

This is a very distinct group, in spite of what I have published to the contrary. The following species have been found in the collections of the South Australian Museum, and are tabulated with the two species already known. The antennae are 11-jointed.

I. Segment 2 distinctly over half the surface and over thrice longer than 3 (dorsal aspect at meson).

a. °Femur 3 red. Antennae black. Tibiae red. Wings clear. Segment 3 much convexed at apex. Coxae and basal  $\frac{2}{3}$  femora 1-2, tegulae save distal edge, black .. .. . *pilosella* Cameron

aa. °Femur 3 black except mesad; scape, pedicel red. Tibia 1 red, 3 black, 2 so at base. Wings smoky. Segment 3 only somewhat convex at apex, reticulated dorsad. Eyes naked. Base of femora, femur 2, tarsi, mesal aspect except dorsad at distal  $\frac{1}{2}$  of femur 3, knees, tips tibiae, red. Funicles 2-3 half longer than wide, not as long as pedicel .. .. . *multistriata* Girault

II. Segment 2 not quite  $\frac{1}{2}$  surface, 3 over half 2 (or less and deeply concaved).

b. °Segment 3 with apical margin slightly concave, surface densely pin-punctate. Femur 3 black, antennae black; tibiae, tarsi, knees, tegulae red. Wings smoky (light). Thorax pilose. Eyes hairy. Coxae, femora 1-2 save ends, black; apical pedicel red; funicle 1 wider than long, 2 quadrate. Punctures scutellum much coarser

than those of cephalic scutum. Segment 3 dorsad, nearly entirely densely pin-punctate. Lateral ocellus midway between eye and median. Lateral margin propodeum strongly bidentate.. *silvae* sp. nov.

- bb. "Segment 3 with apical margin deeply concave, surface glabrous with scattered punctures, dense laterad (and widely so on apex). Wings almost black, tegulae black. Eyes naked. Funicles and pedicel longer. Thorax shining, hairs longish. Twice larger. Tibiae save red ends, black. Legs black, knees, tibiae reddish. Segment 4 glabrous, hairs just before apical edge. Striae segment 2 coarse .. .. . *silvifilia* sp. nov.

**IRICHOHALTICHELLA SILVAE Girault.**

S. Aust.: Mount Lofty Range (N. B. Tindale). The type is a female.

**IRICHOHALTICHELLA SILVIFILIA Girault.**

N.S. Wales: Liverpool (A. M. Lea). A single female.

**CHALCITELLOIDES Girault.**

**CHALCITELLOIDES IO Girault.**

S. Aust.: Mount Lofty Range (N. B. Tindale). A female.

Coxa 2 was red-brown and the petiole more or less reddish beneath.

SUB-FAMILY CALLIMOMINAE.

**MACRODONTOMERUS Girault.**

**MACRODONTOMERUS TRIANGULARIS Girault.**

This is a very common species, and the following specimens have been identified from this collection:

Single females, Mount Lofty (J. G. O. Tepper), Tarcoola; five females by use of the sweep-net, Mount Lofty, S. Aust. (A. M. Lea); Tasmania, two fragments and one from same locality.

**MACRODONTOMERUS ALIGHERINI sp. nov.**

Scape yellow except above. As *M. triangularis*, but sculpture more rough and pilosity of head and upper thorax much more evident; femur 1 usually widely yellow dorsad apically.

Type a female, Macleay Museum, labelled, "Sydney, N.S. Wales." Three cotypes in Macleay Museum same locality, and paratypes in Queensland Museum and South Australian Museum.

In the South Australian Museum collection were also seven females, Melrose, S. Aust., Oct. (A. M. Lea), and these are designated paratypes.

#### **DITROPINOTELLA Girault.**

##### **DITROPINOTELLA COMPRESSIVENTRIS Girault.**

The following specimens of this common species: A female, Adelaide, May 5, 1913 (H. H. D. Griffith), and another reared from galls or lerp, Mount Pleasant, S. Aust. (Loveday), Feb., 1897.

In the first specimen femur 3 bore some metallic.

#### **PODAGRIONELLA Girault.**

##### **PODAGRIONELLA SPILOPTERION Cameron.**

Three females, Launceston, Tasn., Nov., 1914 (F. M. Littler, No. 2283). The segmentation of the club is distinct.

##### **PODAGRIONELLA JULIA sp. nov.**

Wings hyaline. Ovipositor twice the length of the body.

Coxae, femur 3, tibia 3, femur 2 laterad, femur 1 above more or less, aeneus. Flagellum black, scape rufous, aeneus at apical  $\frac{1}{2}$ . Abdomen with segments 2-4, apex widely of 5 (latter long, equal 2-4 united) and 7 and 8 (or distal 2) at sides beneath, reddish or rosaceous (the basal red equals middle aeneus or nearly). Cross-suture scutellum very distinct, glabrous distad of it. Apex tibia 3 normal, 1-2 of tarsus 3 equal, longest. Funicle 1 quadrate, shorter than pedicel, 7 distinctly wider than long. Postmarginal twice the stigmal. Lateral ocellus closer to eye, thrice closer to it than to median and farther apart than each is from median. Propodeum with meson widely foveate, rest finely punctate-scaly, foveate part terminating beyond middle in a sort of cross ridge.

S. Aust.: Adelaide (N. B. Tindale). By sweeping.

#### **MEGASTIGMUS Dalman.**

##### **MEGASTIGMUS QUADRISSETAE sp. nov.**

Scutellum with four bristles, 1-3 equidistant, 4 half closer to 3 (No. 3 absent on one side); no cross-suture. Ovipositor  $\frac{3}{4}$  body. Thorax with a wide median stripe to apex scutellum, wider on scutellum. Antennae black except scape and



pedicel beneath somewhat, club a bit yellowish. Funicle 1 half longer than wide, exceeding pedicel; last subquadrate.

Flavous; scutum, scutellum, and mesopleurum orange, the following black: Upper occiput, ocellar area widely, cephalic margin scutum except lateral corner, thorax surrounding axillae, dorsal sutures, thoracic venter, propodeum nearly to spiracle and its spiracular sulcus and dorso-lateral sulcus (continued in a wide stripe down cephalo-lateral aspect of coxa 3); cephalic margin mesopleurum, a stripe along middle of side of femur 1, and an elongate mark on distal middle side of femur 3. Abdomen with conspicuous jet encircling bands, fainter beneath (6, these equally distributed over the surface, 1 and 2 near base, dorsal and more or less suffused). Ocelli in a curved line. Jaws tridentate. Sculpture of scutum fine.

Tasm.: Cradle Mountain (H. J. Carter and A. M. Lea). One female.

#### **MEGASTIGMUS SEXSETAE** sp. nov.

Scutellum with six bristles (on one side only 4, 1 and 6 absent), with the exception of 2-3, nearly equally spaced, 6 just beyond a distinct cross-suture. Jaws bidentate, 2 widely truncate. Cross-striation of scutum ruder than usual, and there is a single slender, fine bristle on disk caudad towards meson and nearer middle than to apex. Ocelli in a curved line. Ovipositor equal body. Funicle 1 longer than wide, exceeding pedicel distinctly.

Orange, caudal margin pronotum *widely* and much of face lemon. Black: Antennae except scape (except above), pedicel beneath, upper occiput, ocellar area narrowly, spot at side neck prothorax, suture between pro- and mesopleurum, a triangle on prosternum (lines only), rest of sternum, notum laterad of scutellum and axillae including lateral margin of latter, propodeum to spiracle and nearly to apex; apex segment 2 widely, 3-7 widely except apex of each.

Tasm.: Lameceston, Dec., 1915 (F. M. Littler).

#### **NEOMEGASTIGMUS** Girault.

##### **NEOMEGASTIGMUS ATER** sp. nov.

Similar to *N. pocta*, but the ovipositor nearly as long as body, and the antennae are suffused with yellow, the cheeks, face to mouth, venter and apex abdomen (and base more or less), golden; also coxae 1-2. Funicle 1 a bit longer than wide, equal pedicel. Lateral ocellus midway between eye and median; hind femur with faint, outer middle blotch. Propodeum without median carina, or this very weak. Last two bristles (2 and 3) of scutellum closer together. Scutum without discal setae, finely cross-striate.

Male black except orbits on vertex, hind margin pronotum, mesal margin

axilla, tibiae, tarsi, most of femora (sometimes as female, and even with pronotum, caudal scutum and disc scutellum yellow). The male coxa 3 may even be yellow in variations toward yellow.

S. Aust.: Blakiston.

From specimens labelled "From galls on leaves of *Eucalyptus obliqua*, April, 1888. Emerged in May, Sueaton."

**PSEUDIDARNES gen. nov. (Idarnini).**

Antennae in middle of face, 13-jointed, 2 ring-, 3 club-joints; jaws 3-dentate, 3, truncate, wide, but not very wide; clypeus with two wide (wider than long), truncate teeth at meson; lateral ocelli distinctly closer to eye than to median, not near eye; marginal vein more or less  $\frac{1}{2}$  submarginal, somewhat exceeding the long postmarginal, which is a bit shorter than the well-developed, curved stigmal. Parapsidal furrows complete, distinct. Scutellum with a lateral groove, truncated behind by a line of foveae, subquadrate, and a bit convex. Propodeum with a median carina, convex, spiracle minute, round. Petiole quadrate,  $2\frac{1}{3}$  surface, longest, ovipositor as long as body. Hind tibial spurs double, unequal, larger spur curved. Abdomen ovate, no longer than thorax.

A genus characterized by the distinctly petiolate abdomen and the shortness of the latter.

**PSEUDIDARNES MINERVA sp. nov.**

Aeneus, scaly, wings clear, veins brown; scape, tip tibia 3, other tibiae, knees, tarsi, dull yellow. Funicles short, 1 quadrate, exceeding the pedicel, rest a bit shorter. Scape short, equal short club. Joint 1 of tarsus 3, elongate, half the tarsus. Mesopleurum with a deep, oblique cross-suture through it, dorso-ventrad. Abdomen somewhat compressed. Discal cilia absent proximad of base of marginal vein.

N.S. Wales: Sydney (A. J. Coates). A female from *Ficus rubiginosa*.

**KOEBELEA Girault.**

**KOEBELEA FUSCA Girault.**

Two females, Cairns district (A. M. Lea).

**KOEBELEA FUSCA Girault, FLAVA var. nov.**

The same as the typical form, but light yellow, no mark on axilla, and only the first three stripes are present upon the abdomen, and these are abbreviated (across meson only). The scutellum appears a bit shorter.

N. Terr.: Roper River (N. B. Tindale). A female reared with *Blastophaga nivicipes* from *Ficus glomeratus*.

**GONIOGASTRELLA Girault.****GONIOGASTRELLA CAUDATA Girault.**

A female, Cairns district, Queensl. (A. M. Lea). Another reared from *Picus glomeratus*, Roper River, N. Terr. (N. B. Tindale). Associated with *Blastophaga niveipes*.

## SUB-FAMILY PTEROMALINAE.

**ORMYROMORPHA Girault.****ORMYROMORPHA TRIFASCIATA Girault.**

A female, Hughes; also three from Melrose, S. Aust., Oct. (A. M. Lea).

**ORMYROMORPHA SILVIFILIA sp. nov.**

The following description is extracted from my table of species of this genus: "Scutum and scutellum with only two setae, the distal pair of scutellum. As *petiolata*, but petiole only  $\frac{1}{3}$  length of propodeum, a bit wider than long. Larger, hyaline cross-stripe narrower than usual, 2 barely exceeding distal dark stripe, 1 wider than 2 and greatly curved, due to the unusual conical projection of the hind margin of dark stripe 1; the cephalic curve of this is longer and wider than the caudal; moreover, hyaline 2 is just beyond apex stigmal, not at it. Fringes usual. Hind wing widely dusky at apex. Size usual, stout. Funicles 1-2 subequal.

Lateral ocellus nearly twice closer to eye than to median; abdomen 2 without dorsal pilosity. Propodeum with longitudinal rugae. Pilosity of scutellum at base only. Tibia 1 except sides, tarsi 1-2, yellow-brown, so flagellum, scape so at distal  $\frac{1}{2}$  or less."

N.S. Wales: Dorrigo. One female.

**ORMYROMORPHA AENEISCAPUS sp. nov.**

As *O. trifasciatipennis*, but antennae entirely metallic, (distal) bristles of scutellum (on suture) with a distinct seta behind it. Hyaline 1 exceeding 2 and much exceeding fuscous stripe 1.

S. Aust.: Kangaroo Island (A. M. Lea). One female.

**TOMOCERA Howard.****TOMOCERA VIRIDIVERTEX sp. nov.**

This description is taken from the table of species:

"Apical margin forewing clear; postmarginal shorter than stigmal. Hairs of scutum long, bristles; abdomen green. Postmarginal much shorter than stigmal. As *T. glabriventris*, but vertex and clypeus metallic; forewing with two fuscous marks, 1 across from base of marginal vein, 2 half across from apex stigmal;

No. 1 is straight. Funicle above, pedicel above, club black. Lateral ocellus midway between eye and median. Legs and other parts head red-brown."

S. Aust.: Melrose, Oct. (A. M. Lea). Two females.

**TOMOCERA GLABRIVENTRIS** Girault.

A female, Cornwallis Island, Torres Straits (C. T. McNamara).

**OPHELOSIA** Riley.

**OPHELOSIA ALIGHERINI** sp. nov.

Description taken from table of species: "Thorax above nonmetallic or only washed with metallic. Funicle pale or dark in part only. Thorax washed with metallic in places. Abdomen yellow, darker above beyond the long segment 2; club yellow at basal  $\frac{1}{3}$ ; bristles of scutellum pale; second cross-stripe barely touching marginal. Red-brown, sentum washed metallic. Funicles 1-2 and pedicel above, black."

Tasm.: Waratah (A. M. Lea and H. J. Carter). One female.

**OPHELOSIA CRAWFORDI** Riley.

Three females reared from a white-fluffy coccid, Launceston, Tasm. (F. M. Littler, No. 2383).

**OPHELOSIA KEATSI** sp. nov.

Runs to *O. viridithorax*, but head except ocellar area, prothorax except notum, sides and ventum thorax, legs, scape, abdomen beneath, segment 2 above except spots at middle and apex of margins, base and apex, reddish-yellow. Flagellum black. Sentum pilose, scutellum glabrous or nearly, with four bristles, axilla with one laterad. Forewing with a large, fuscous area from the whole of stigmal and distal part of marginal, this projecting distad of the vein. A narrow stripe across from bend of submarginal vein. Postmarginal equal stigmal. Propodeum longitudinally rugulose.

S. Aust.: Hughes (A. M. Lea).

**PSEUDIPARELLA** gen. nov. (Diparini).

Habitus of *Lelaps*, but hind tibial spur single, short. Antennae in middle of face, 11-jointed, with a short ring-joint and a solid club; jaws 3-dentate, maxillary palpi 4-jointed. Parapsidal furrows short, obtusely joined just before apex sentum. Scutellum with a cross-suture at base of distal  $\frac{1}{3}$ . Propodeum with a median carina and short neck, petiole quadrate. Segment 2 half of surface, twice 3, which is large; ovipositor not extruded. Wings abbreviated, reaching base of abdomen, clavate, truncate at apex, brown, naked except for

4-5 very elongate, gross setae from the venation, which extends nearly to apex and terminates in a sessile, globular stigmal vein.

**PSEUDIPARELLA EMERSONI** sp. nov.

Reddish-brown, the coxae and scape paler, cheeks below eyes dusky; flagellum except pedicel beneath, parapsides, dorsum (yellowish towards base) and upper sides abdomen, black. Scutellum with four bristles, the caudal pair farther apart and on the cross-suture; seutum with scattered short setae and a pair of short bristles caudad in disc. Pedicel subelongate, funicles subquadrate, 7 wider, A pair of stout bristles from upper occiput, these wide apart.

Tasm.: Wilmot (A. M. Lea and H. J. Carter). One female.

**PACHYNEURON** Walker.

**PACHYNEURON KINGSLEYI** Girault.

A female from Tasmania.

**ISOPLATOIDES** Girault.

**ISOPLATOIDES QUADRIPUSTULATUS** sp. nov.

As *I. tripustulatus*, but parapsidal furrows complete, first two spots on wing united, and there is a fourth spot farther distad than 3, nearly midway between apex of stigmal and apex of wing. Antennae red, tegulae yellow, trochanters, tarsi, knees, tibial tips white, also all of tibia 1 above. Ring-joint 3 equal the others; funicle 1 twice longer than wide, distinctly exceeding pedicel. Clypeus somewhat produced, concaved widely across apex. Propodeum as in named species. Jaws 4-dentate, 4 obtuse at apex and shorter.

The complete parapsidal furrows in *I. tripustulatus* are more apparent than real (so often the case in these small metallic Pteromalinae and Miscogasterinae), so that the species differ, so far as known (all jaws have not been seen), only in colour and marks on wing. The parapsidal furrows in this genus are at first strongly oblique, but after middle they suddenly turn almost to the perpendicular.

N.S. Wales: Barellan (A. M. Lea). One female.

SUB-FAMILY MISCOGASTERINAE.

**SYSTASIS** Walker.

**SYSTASIS KEATSI** sp. nov.

Wing with a midlongitudinal fuscous stripe from opposite base marginal vein. Head umbilicately punctate. Spaces between jaw teeth 2-3 serrate. Knees and tibiae red, antennae black, knees 1-2 widely red.

Bronze. Scutum, lateral parapsides imbricately punctate, scutellum with a longitudinal line of these punctures on each side of meson (not close to median line); clypeus with a fovea on each basal corner; a line of slender ciliae under marginal vein. Propodeum strongly 3-carinate. Tegulae red. Funnicles quadrate. Lateral ocelli closer to eye than to median. Scrobes deep, very short.

S. Aust.: Mount Lofty (A. M. Lea). One female by sweeping.

**EROTOLEPSIELLA Girault.**

**EROTOLEPSIELLA NEMORUM sp. nov.**

Scutellum with only the apical bristles, these gross, scutum pilose.

Metallic; knees 1-2, tibia 1, also 2 except out from base above, tarsi, red-yellow; tibia 3 at base ivory. Second stripe forewing large, convex on each margin (from most of postmarginal vein); first widens caudad, and is from a loose hair patch at base of bend of submarginal. Larger hind tibial spur shorter than tarsus I (latter equal 2-3). Lateral ocelli nearly twice closer to eye than to median, vertex pin-punctate. Abdomen coarsely scaly, segments 4-5 longest. Scutellum with a distinct cross-suture before apex, distad of this finely long-striate, this part equal the glabrous postscutellum. Apex of segments and propodeum (nearly) smooth, latter tricarinate, but lateral carina obscure, a distinct spiracular sulcus and a collar-like neck. Longish setae on distal segment; (antennae missing). Parapsidal furrows complete.

Tasmania. One female.

SUB-FAMILY EULOPHINAE.

**CLOSTEROMYIJA Girault.**

**CLOSTEROMYIJA SPECIOSA sp. nov.**

As the genotype, but stripe at base of marginal vein oblique; the second stripe is from a little distad of middle of marginal, and forms a crooked Y with the one from the stigmal and postmarginal veins; the tail of this Y is the thickest part. No distal arm from this, and no hyaline dots in the middle stripe; a small streak of brown in middle of wing between first stripe and the Y. A line of slender discal ciliae along marginal.

Legs yellow except coxae, femora 2-3, dorsal edge femur 1 at base. Otherwise the same. Scutellum with four bristles.

The head, antennae, and hind wings were missing from this specimen.

Tasm.: Strahan (A. M. Lea and H. J. Carter). An apparent female.

Although the sex of this specimen is not known with certainty, and the antennae are missing, it has all the other characters of the genus, and I must confess that the striking and beautiful marking of the forewing has been my guide in assigning it its position. The genotype also has a heavily marked and beautiful wing, characteristic of some genera, e.g., *Closterocerus*.

**ENTEDONELLA Girault.****ENTEDONELLA AEREISCAPUS sp. nov.**

Aeneus, venation black, wings clear: knees, tibial tips, sides of tibia 1, joint 1 of first two pairs of tarsi, paler. Funicle 1 half longer than wide, subequal pedicel; club acute, no terminal spine. Densely scaly-punctate. Lateral ocellus somewhat closer to eye than to median. Parapsidal furrows ending in a shallow depression; two bristles on apical scutellum. Spiracle round, on a plain surface, an impression mesad of it; caudal margin propodeum sulcated. Petiole very short, abdomen equal rest of body. Postmarginal exceeding stigmal. As genotype. Very close to next. The genera here have since been carefully revised and this difficult group better ordered.

S. Aust.: Mount Lofty Range (N. B. Tindale). One female.

**PELOROTELOPSELLA Girault.****PELOROTELOPSELLA AUSTRALIENSIS Girault.**

As description of genotype, but scape metallic except at base, tibia white at tip (not distal  $\frac{1}{3}$ ), tibia 1 entirely white narrowly dorsad. The groove along each side of median carina is deep and with acute lateral margins. The lateral sulcus also has acute lateral margin. Venation dark.

Abdomen sessile, longer than wide. Parapsidal furrows "interrupted" behind middle. Densely scaly punctate. Bristles scutellum gross.

S. Aust.: Melrose, Oct. (A. M. Lea). One female.

## SUB-FAMILY AGAONITINAE.

**PLEISTODONTES Saunders.****PLEISTODONTES NIGRICAPUT sp. nov.**

Differs from *P. imperialis* in having the underside of femora, the scape, the tibiae, and tarsi yellow, wings hyaline; and from *P. froggatti* in having the scape short and convexly dilated, and in other ways; from *P. nigris* in the colour of the femora, and perhaps in the male.

Male: Head black, rest of body white; the hind margin of head convex and entire, club notably short, almost quadrate and truncate at apex.

Female: Head nearly twice longer than wide, jaws at least 4-dentate, funicle 2 cup-shaped, a bit longer than wide and distinctly smaller than 3, latter half longer than wide, equal 4, pedicel globular, small. The scape bears a distinct tubercle just before middle, but this is on the shaft, and is covered by the regular convex expansion.

S. Aust.: Adelaide: Many specimens from *Ficus rubiginosus*. Also six females from same host, N.S. Wales, Sydney (A. J. Coates).



**PLEISTODONTES FROGGATTI** Mayr.

A female of this species taken at light, Cairns, Queensl. (A. M. Lea).

It agrees with Grandi's figures, but funicle 2 was distinctly shorter in proportion to 3, only half longer than wide, and only about  $\frac{1}{2}$  of 3. Ovipositor  $\frac{2}{3}$  abdomen.

**BLASTOPHAGA** Gravenhorst.**BLASTOPHAGA NIVEIPES** sp. nov.

As *B. insularis*, but black, scape (brown-yellow), funicle 1, and legs dusky snow-white, thorax beneath and a quadrate area centrally on face just above antennae, pallid; club solid, scape with the tubercle beneath, uniformly, convexly dilated. Pedicel thickly beset with stout spines, exceeding all funicles, of which 1 is wider than long, 2 cup-shaped and smaller than the rest, which are a bit longer than wide. The sheath is as in *B. insularis*, but terminates in a stout, colourless spine, and attains apex of 3. The head narrows a bit cephalad, and is somewhat longer than wide. Postmarginal shorter than marginal, exceeding stigmal.

N. Terr.: Roper River (N. B. Tindale). From *Ficus glomeratus*.

A comparison of the type of *B. insularis* shows these differences: The pedicel is not thickly beset, as above, but its spines are longer and less dense, the head is smaller, with less obvious setae, the club segmented distinctly, the legs are dark, scutellum with a cross-row of only a few (4) dots, many in other; tibia 1 is not heavily armed at apex, the postmarginal vein is faint and shorter, and there is no distinct patch of ciliae on caudal margin near base as in the other. Thus the two species differ in a number of structural details.

**BLASTOPHAGA SEMIAURICEPS** sp. nov.

Differs from *B. insularis* and *B. nigriscapus* in having the lower part of head and face up to middle yellow; from the former: ovipositor only  $\frac{1}{2}$  abdomen, funicle 1 shorter than 2, which is shorter than pedicel, entirely black except parts mentioned, tibiae, tarsi, much of femur 1, red-brown; no tubercle on ventral scape, club joints distinct, subquadrate. Scape with a rather large bulge beneath centrally.

From *B. ghigi*: Tibia 3 above without long hairs, 1 of tarsus 3,  $2\frac{1}{2}$  times longer than wide and exceeding 2 plus 3 (in other only  $\frac{1}{4}$  longer than wide and equal 2 and 3 mited, the latter wider than long); the antennal fovea is quite different, being a deep circular excision, and there is no median suture from it (males).

S. Aust.: Adelaide, Dec., 1913 (H. H. D. Griffith). Many specimens of both sexes. Cotypes in Queensland Museum.

The sheath ends in an *acute* pale spine, and does not attain to apex of 3.